

ABSTRACT OF THE DISCLOSURE

A method for lightpath restoration in a reconfigurable optical network comprises the steps of naming each network addressable element in said reconfigurable optical network, determining current topology in said reconfigurable optical network, determining current resources in said reconfigurable optical network, requesting establishment of a lightpath, requesting reservation of restoration capacity, allocating the lightpath, and reserving the restoration capacity. Also disclosed is a method for lightpath restoration that comprises the steps of reserving restoration capacity, detecting transmission failures in the reconfigurable optical network, handling exceptions as a result of transmission failures, and allocating transmission capacity. In addition, a corresponding system is presented to accomplish lightpath restoration in a reconfigurable optical network that comprises means for each of naming each network addressable element in said reconfigurable optical network, determining current topology in said reconfigurable optical network, determining current resources in said reconfigurable optical network, requesting establishment of a lightpath, requesting reservation of restoration capacity, allocating the lightpath, and reserving the restoration capacity. A system for lightpath restoration in a reconfigurable optical network also is disclosed that comprises means for each of reserving restoration capacity, detecting transmission failures in the reconfigurable optical network, handling exceptions as a result of transmission failures, and allocating restoration capacity.